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Computer Science 302

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TQ – C4

**True / False**

**Q:** Link-based implementations are preferred over arrays when the expected size of the data is not fixed, or if it is fixed but the fixed size is large.

**A:** False. (The first part is true, but the latter part is true only if the average size is much smaller than the maximum fixed size)

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**Multiple Choice**

**Q:** For which of these cases can you omit the copy constructor?

**A:**A. Deep Copy  
B. Nested Copy  
C. Shallow Copy  
D. Infinite Copy

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**Fill in the Blank**

**Q:** Classes that use only \_ \_ \_ can depend on the compiler-generated destructors.

**A:** statically allocated memory

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**Short Answer**

**Q:** Write the header file for the template class Node

**A:**   
/\*\* @file Node.h \*/

#ifndef \_NODE

#define \_NODE

template < class ItemType>

class Node

{

private :

ItemType item; // A data item

Node<ItemType>\* next; // Pointer to next node

public :

Node();

Node( const ItemType& anItem);

Node( const ItemType& anItem, Node<ItemType>\* nextNodePtr);

void setItem( const ItemType& anItem);

void setNext(Node<ItemType>\* nextNodePtr);

ItemType getItem() const ;

Node<ItemType>\* getNext() const ;

}; // end Node

#include "Node.cpp"

#endif

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